

REMARKS

Claims 1-9 and 16-18 are pending. The Examiner's reconsideration of the objections and rejections is respectfully requested in view of the amendments and remarks.

The disclosure has been objected to; the Examiner suggested that the Cross-Reference to Related Application, which is referred to in the transmittal papers, be added to the specification. The Cross-Reference to Related Application has been added accordingly. Reconsideration of the objection is respectfully requested.

Claims 1-3 and 6-8 have been rejected under 35 U.S.C. 102(a or e) as being anticipated by Mahoney (US 2003/0042291). The Examiner stated essentially that Mahoney teaches all the limitations of claims 1-3 and 6-8.

Claim 1 claims, "A method for densification of a thermal spray coating comprising: depositing a thermal spray coating on a substrate; and mixing the thermal spray coating and the substrate by friction stir welding, forming a composite material consisting of the thermal spray coating and the substrate."

Mahoney teaches a method of welding two workpieces having an interface layer deposited there between (see paragraph [0033]). Mahoney does not teach "mixing the thermal spray coating and the substrate by friction stir welding, forming a composite material consisting of the thermal spray coating and the substrate" as claimed in claim 1. Mahoney's method forms a weld comprising the first and second workpieces and the interface layer. Mahoney does not teach a composite material consisting of a thermal spray coating and a substrate, essentially as claimed in claim 1. Therefore, Mahoney fails to teach all the limitations of claim 1.

Claims 2, 3 and 6-8 depend from claim 1. The dependent claims are believed to be allowable for at least the reasons given for claim 1. The Examiner's reconsideration of the rejection is respectfully requested.

Claims 4 and 5 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Mahoney as applied to claims 1-3 and 6-8, and further in view of Lazarz et al. (USPN 6,227,435). The Examiner stated essentially that the combined teachings of Mahoney and Lazarz teach or suggest all the limitations of claims 4 and 5.

Claims 4 and 5 depend from claim 1. The dependent claims are believed to be allowable for at least the reasons given for claim 1. The Examiner's reconsideration of the rejection is respectfully requested.

Claim 9 has been rejected to under 35 U.S.C. 103(a) as being unpatentable over Mahoney as applied to claims 1-3 and 6-8 above, and further in view of Sherman (US 2003/0012678). The Examiner stated essentially that the combined teachings of Mahoney and Sherman teach or suggest all the limitations of claim 9.

Claim 9 depends from claim 1. The dependent claim is believed to be allowable for at least the reasons given for claim 1. The Examiner's reconsideration of the rejection is respectfully requested.

New claims 16-18 are believed to be allowable. For example, claim 16 claims, *inter alia*, "depositing a second thermal spray coating on the composite material, wherein the second thermal spray coating is not densified."

The cited references teach methods for friction stir welding of two workpieces (Mahoney) and the densification of a thermal spray coating (Sherman). However, the references, alone or in combination, do not teach "depositing a second thermal spray coating on the


composite material, wherein the second thermal spray coating is not densified," as claimed in claims 16. Therefore, claim 16 is believed to be in condition for allowance. Claim 18 includes similar limitations and is believed to be allowable for at least the reasons given for claim 16.

Claim 17 depends from claim 16 and is believed to be allowable for at least the reasons given for claim 16.

For the forgoing reasons, the application, including claims 1-9 and 16-18, is believed to be in condition for allowance. Early and favorable reconsideration of the case is respectfully requested.

Respectfully submitted,

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